

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for ~~[[the]] thermal treatment of treating~~ granular solids in a fluidized bed ~~(3, 3a)~~ which is located in a fluidized-bed reactor ~~(1, 1a)~~, ~~wherein comprising feeding~~ microwave radiation ~~[[is fed]]~~ into the fluidized-bed reactor ~~(1, 1a)~~ through at least one wave guide ~~(5)~~, ~~characterized in that the inclining microwaves by an irradiation angle of the microwaves is inclined by an angle of 10° to 50°, in particular 10° to 20°, with respect to [[the]] a principal axis (11) of the fluidized-bed reactor (1, 1a).~~

2. (Currently Amended) The method as claimed in claim 1, ~~characterized in that further comprising feeding~~ a gas stream ~~[[is fed]]~~ into the fluidized-bed reactor ~~(1, 1a)~~ through the at least one ~~[[same]]~~ wave guide ~~(5)~~.

3. (Currently Amended) The method as claimed in claim 2, ~~characterized in that wherein~~ the gas stream introduced through the at least one wave guide ~~(5)~~ contains gases which react with the fluidized bed ~~(3, 3a)~~.

4. (Currently Amended) The method as claimed in claim 2 ~~or 3~~, ~~characterized in that wherein~~ the gas stream introduced through the at least one wave guide ~~(5)~~ is additionally utilized for a fluidization of the fluidized bed ~~(3, 3a)~~.

5. (Currently Amended) The method as claimed in ~~any of claims 2 to 4~~, ~~characterized in that claim 2, wherein~~ heat is additionally supplied to the fluidized bed ~~(3, 3a)~~ by the introduced gas stream.

6. (Currently Amended) The method as claimed in ~~any of claims 2 to 4~~, ~~characterized in that claim 2, wherein~~ the fluidized bed ~~(3, 3a)~~ is cooled by the introduced gas stream.

7. (Currently Amended) The method as claimed in ~~any of claims 2 to 4~~, ~~characterized in that claim 2, wherein~~ by ~~means of introducing~~ the gas stream ~~introduced~~ into the at least

one wave guide, (5) solid deposits are avoided in the at least one wave guide are avoided (5).

8. (Currently Amended) The method as claimed in ~~any of claims 2 to 4, characterized in that~~ claim 2, wherein the reactor comprises at least two fluidized-bed reactors (~~1, 1a~~), which are separated from each other by weirs or partitions (~~19, 21~~) such that solids can move as migrating fluidized-bed from one fluidized-bed reactor (~~1~~) into the adjacent fluidized-bed reactor (~~1a~~).

9. (Currently Amended) The method as claimed in ~~any of claims 2 to 4, characterized in that the~~ claim 2, comprising combining a microwave source (~~7~~) ~~is combined~~ with a secondary gassing (~~6~~) of a ring conduit and that the at least one wave guide (5) is at the same time simultaneously used for secondary gassing.

10. (Currently Amended) The method as claimed in ~~any of claims 2 to 4, characterized in that~~ claim 2, wherein ~~the used frequency of the microwave radiation [[is]]~~ has a frequency between 300 MHz and 30 GHz, ~~preferably at the frequencies 435 MHz, 915 MHz and 2.45 GHz.~~

11. (Currently Amended) The method as claimed in ~~any of claims 2 to 4, characterized in that~~ claim 2, wherein ~~the temperatures in the fluidized bed (3, 3a) are~~ has a temperature between 150°C and 1200°C.

12. (Currently Amended) The method as claimed in ~~any of claims 2 to 4, characterized in that the~~ Particle-Froude-Number Fr_p in claim 2, wherein the at least one wave guide (5), is has a Particle-Froude-Number (Fr_p) between 0.1 [[to]] and 100, preferably 2 to 30.

13. (Currently Amended) A plant for ~~[[the]] thermal treatment of~~ treating granular solids in a fluidized bed (~~3, 3a~~), ~~in particular for performing the method as claimed in any of claims 1 to 12,~~ claim 1, comprising a fluidized-bed reactor (~~1, 1a~~), a microwave source (~~7~~) disposed outside the fluidized-bed reactor (~~1, 1a~~) and a wave guide (~~5~~) for feeding the microwave radiation into the fluidized-bed reactor (~~1~~), ~~characterized in that~~ wherein the

wave guide (5) is inclined by an angle of 10° to 50° , ~~in particular 10° to 20°~~ , with respect to ~~[[the]]~~ a principal axis (11) of the fluidized-bed reactor (1, 1a).

14. (Currently Amended) The plant as claimed in claim 13, ~~characterized in that~~ wherein the wave guide (5) has a rectangular or round cross-section, which is adjustable ~~whose dimensions are adjusted in particular to the used frequency of the microwave radiation.~~

15. (Currently Amended) The plant as claimed in claim 13 ~~or 14, characterized in that,~~ wherein the wave guide (5) has a length of 0.1 m to 10 m.

16. (New) The method as claimed in claim 10, wherein the frequency is 435 MHz, 915 MHz, or 2.45 GHz.

17. (New) The method as claimed in claim 12, wherein the Particle-Froude-Number is between 2 and 30.

18. (New) The plant as claimed in claim 13, wherein the angle is between 10° and 20° .